Welcome

WAC 173-350- REVISING WASHINGTON'S SOLID WASTE RULE

Waste 2 Resources 350 team

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Agenda

9:30 a.m. - Welcome

9:40 a.m. – Presentations:

-020,030 and 990

- 235 and 995

- 110

12 p.m. – Lunch break

1 p.m. – Presentations:

- 210 and 310

- 360

- 320

- 330, 400, 410 and 405

- 350 and 355

- 700, 710, 715 and 200

- Minor changes: 010, 025, 040, 100, 230, 240, 300, 490, 500, 600 and 900

4 p.m. – Finish



Housekeeping

- Help yourself to coffee, morning snacks
- Wifi is "ciscosb" no password
- Lunch break noon to 1 p.m. several restaurants, grocery stores just west on Pacific Avenue
- Reference copies of preliminary draft language next to the focus sheets.



Revising the Solid Waste Rule

Kyle Dorsey

Rules & Policy Coordinator Waste 2 Resources Program





Brief Process Overview

Basic Process

- We tell you we are thinking about a rulemaking
- We formally propose a revised rule
- You formally comment
- We evaluate your comments
- We adopt the rule (or not)



Our Process for this Rule

- We told you we were thinking about doing something (2013)
- We formed advisory committees (2014)
- Staff and committee members spent two years working together
- We shared on the web and through our ListServ
- We put together informal workshops (2016)
- We will look at feedback (2016)
- Formal proposal planned (late 2016)
- Formal public hearings (early 2017)
- Adopt the rule (or not) (mid 2017 or before)



Revising the Solid Waste Rule

YOUR PARTICIPATION IS IMPORTANT!

Outcomes of the informal process may include:

- Changes to the rule
- Responsiveness summary
- A formal proposal with hearings





Mile-high Overview

Current Rule

- 29 sections26 open for revision
- Not open: 220, 225, and 250 regarding organics



Repealing

990 – Criteria for inert waste



Two Sections Renamed

210

"Recycling" becomes...

"Recycling and material recovery facilities"

310

"Intermediate solid waste handling facilities" becomes...

"Transfer stations and drop box facilities"



Adding five sections All of which will be addressed by staff today

- 110 Determination of Solid Waste
- 235 Soil and Sediment Criteria and Use
- 355 Waste Tire Transportation
- 405 Hybrid Waste Landfills
- 995 Soil and Sediment Screening Levels





Much ado about moving things (sort of)

020 – Applicability

If it's solid waste, then the options are "permit" or "no permit."

- Not applicable
- Applicable
 - Conditionally Exempt



Examples of things that moved from 020 - Applicability

Drop boxes used solely for collecting recyclable materials

-Exemption moved from 020 to 310

Manures and crop residues returned to the soils at agronomic rates

-Moved from 020 to 230



Examples of things added to 020

New – Steel slag from an electric arc furnace

Added to 020 following 2016 legislation

Exemption for commercial fertilizer

-Moved from 230 to 020



Use of Tables

Tables now used to show conditions for permit exemptions



Plans of Operation

- The requirements for plans of operation have been moved to operating standards
 - -Improve consistency
 - A complete plan is crucial to assessing compliance and approving permits





Effective Dates

Facilities with new solid waste handling units

Comply by the effective date of the applicable regulation.



Existing facilities with permits (each unit)

- 18 to 24 months to comply
- 12 months to submit a revised application if facility upgrades are needed to comply



Existing facilities currently qualifying for exemption *or* previously not regulated under solid waste rules

- Meet any new terms for exemption within 12 months
- Submit permit application within 12 months



WAC 173-350 Sections 235 and 995: Soil and sediment criteria and use

Marni Solheim

Program Facilities Specialist Waste 2 Resources Program











Existing Rules

- Outside of cleanup sites and dangerous waste, no rule exists setting contaminant levels for soil/sediment that has been impacted by a release
 - Safe enough to be unregulated "clean"
 - Safe enough to be used in particular settings
 - Not safe enough landfill/treatment
- Agencies make case-by-case decisions on what uses are okay, use guidance that makes enforcement difficult or impossible, statewide inconsistencies
- Industry has set own standards, putting them in the position of handling materials potentially harmful to humans/environment
- Street waste, petroleum contaminated soils, engineered soil, sediment from impacted waterways to go upland, soil impacted by industrial activities or specific releases





Existing Rules

Problems without a standard in place:

 Historical contamination - Old sawmill site proposed for construction of graving dock. Planned to remove soil and manage as clean. Soil contained PCBs, dioxin, petroleum. Ended up being a cleanup site due to contaminant concentrations. Otherwise, would have been difficult to restrict management.



- Engineered soil several projects have involved soil amended with products that increase the pH of soil, sometimes as high as dangerous waste levels (>12.5). Have been placed or proposed to place in inert waste landfills or reclamation pits – no liner systems or monitoring. Some disposal sites have resulted in high pH surface water discharges.
- Dredge projects standard for upland disposal now based on meeting openwater disposal limits. These may be too constricting or not safe enough since different contaminants are a concern for aquatic rather than terrestrial enviros. There is also increased need to find appropriate upland locations for use.
- Default is often disposal in landfill to avoid liability when there is some contaminant. Draft rule opens up options for use considerations.



Draft Rule Development

- Stakeholder workgroup of 11 people
 - 2 jurisdictional health agencies
 - Local gov't one city, one county
 - WA Dept. of Natural Resources
 - Reclamation pit
 - WA Dept. of Transportation
 - Association of General Contractors
 - WA Dept. of Ecology Water Quality
 - Port of Olympia
 - Topsoil manufacturer



- 12 meetings over ~2 year period beginning April 2014
- WAC 173-350-235 Soil and Sediment Criteria and Use
 WAC 173-350-995 Appendix I Soil and Sediment Screening Levels
- Workgroup draft changed after internal review and other considerations



- Section will pertain to soil/sediment impacted by some kind of release, but that is not dangerous waste or from a formal cleanup site
- Applies to soil/sediment to be moved and used at terrestrial locations
 - Not undisturbed soil/sediment
 - Not in-water disposal
 - Draft rule not intended to regulate movement of all soil/sediment across the state – inadequate resources for this and not justified
 - Draft rule is a means for agencies (DNR, Ecology, local health)
 to address or enforce against unsafe situations, and provide
 some assurances to industry that they aren't accepting
 materials harmful to people or the environment



- No permitting. Allowable uses all conditionally permit-exempt, minimal oversight, self-regulating
 - » Exemption similar to other state soil standards which are policy, guidance, or variances that industry largely implements themselves
 - » Responsible agencies/industries have been managing materials based on some sort of risk analysis for placement already
- Section will govern use of "impacted" soil/sediment
 - Impacted = "release" of a "contaminant" at more than "de minimis" amounts
- Impacted soil/sediment is solid waste, as solid waste is defined





- Whether a soil/sediment is impacted tied to "release" of a contaminant
- No release, defined as "clean," not subject to this rule



- Test results are not considered when there is no determination of a release
- Naturally high background at one area is not a contaminant, as defined, so movement of it elsewhere is not captured
- When background concentrations or test results show a potential health concern where there is no indication of a release, other rules/authorities will need to address this.



- Many exemptions with minimal conditions on use
- Main focus of rule on one area. For this:

5 Soil and Sediment Screening Levels (SSLs) based on risks at receiving sites:

- 1. Residential/Ag/High Frequency Contact SSLs
- 2. Limited Access SSLs (commercial/industrial)
- 3. Ecologically-Sensitive SSLs
- 4. Groundwater-Sensitive SSLs
- 5. Clean SSLs encompasses protections for all of the above and is excluded from the rule
- SSLs for 218 parameters
- Do not have to test for 218 parameters





What is a release?

"Release" means any intentional or unintentional entry of a contaminant into the environment at more than de minimus amounts and includes, but is not limited to, spilling, leaking, pouring, emitting, emptying, discharging, adding, applying, amending, injecting, pumping, escaping, leaching, dumping, or disposing of any contaminant. Placement of impacted soil and impacted sediment in conformance with WAC 173-350-235 or placement of clean soil and clean sediment is not a release under this rule.

"Contaminant" means any chemical, physical, biological, or radiological substance that does not occur naturally in the environment or occurs at concentrations greater than natural background.

- High natural background at source not a contaminant, as contaminant is defined
- · Materials added to adjust soil engineering properties is a contaminant

"**De minimis**" is an amount so small that it has negligible affect on the look, quality, use, or impact to human health or the environment of a material.

• Definition of contaminant is broad, needed to ensure expected bits of wood, concrete dust, equipment engine drips, etc. would not be considered a release









How does one determine if there has been a release?

"Due diligence" means making a good faith effort using investigative techniques to determine whether there may be a release on a property. Investigative techniques may include use of one or more of the following, as warranted by circumstances: review of ownership and use history; visual inspections of property and adjoining properties; review of government records;

Caplinked

Due Diligence Checklist







- The definitions for "clean" and "impacted" are tied to performance of due diligence
- A person must be able to show completion of due diligence
 - Does not mean must keep a record



Due diligence is subjective -

 On one hand, flexibility needed to say visual inspection is fine for soil coming from residential backyard pool project no where near industry.

 On the other, person performing due diligence make the call and unless someone else says different, they can manage soil as "clean."





What is not subject to the draft new section?

- Clean soil/sediment
- Engineered soil used for the same engineering properties at another project is "reuse" (by new definition = not solid waste handling)
- Impacted soil/sediment taken to a limited purpose or MSW landfill
- Impacted soil/sediment taken to a treatment or storage facility meeting other sections of rule, except characterization and use after processing or storage is subject to section



Conditional permit exemptions

The most minimal conditions for the following uses –

- Impacted soil excavated but placed near the location of generation within a project site
- Impacted soil/sediment managed under a DNR permit that addresses substantive conditions
 - DNR does not currently have plans to take this on
 - Silica-based spent foundry sand used in accordance with EPA risk assessment



- Soils impacted from routine, legal activity (wood smoke, auto emissions) used at similar locations
 - Urban residential to urban residential, port property to port property with similar uses

More conditions for -

- Use at sites containing the same contaminants at equal or greater concentrations
 - For use of SSLs above those set in rule
 - Not applicable to sites subject to cleanup



The most attention in the rule and conditions for -

- Impacted soil/sediment placed at locations that will not create an adverse impact on human health, groundwater, ecological receptors
 - Depending on risks at receiving site, must adhere to SSLs for all of the following that may apply:
 - Residential, agriculture, or high frequency human contact
 - Commercial or industrial human contact (limited access properties)
 - Groundwater-sensitive applies when over 2,000 cy will be used as fill over groundwater that is or may be used as potable drinking water
 - Ecologically-sensitive for sites where the primary purpose is to support natural habitat for native terrestrial organisms



- Requires representative sampling and testing of certain parameters
- Use of correct lab detection limits
 - cadmium, mercury, selenium
- Prevent conveyance to other
 properties, must not impact
 quality of surface water, setbacks from
 surface water, above groundwater leve
- Must keep records of generating site, quantity, and test results
- Rule tries to ensure redevelopment by allowing 15' of soil cap at closure that matches future land use SSL

Parameters	Basic Soil Screening	Street Waste	Petroleum Contaminated Soil	Engineered Soil	Sediment	Soil with Specific Potential Releases
Arsenic	Х	Х		Х	Х	
Barium	Х			Х	Х	
Cadmium	Х	Χ		Х	Х	
Chromium	Х	Х		Х	Х	
Lead	Х	Х	Х	Х	Х	
Mercury	Х	Х		Х	Х	
Nickel		Х				
Selenium	Х			Х	Х	
Silver	Х			Х	Х	
Zinc		Х				
TPH¹-Gasoline Range Organics		Х	X ²			
TPH¹-Diesel Range Organics	Х	Х	X ^{2, 3}			
TPH¹-Heavy Oil	Х	Х	X ^{2, 3}			
TPH¹-Mineral Oil			X ^{2, 3}			
Benzene		X ⁴	X ⁴			
Ethyl benzene			X ⁴			
Toluene			X ⁴			
Xylenes			X ⁴			
Methyl Tert-Butyl Ether (MTBE)			Х			
Polychlorinated Biphenyls (PCBs)	χ5		X ⁵		X ₆	
Polycyclic Aromatic Hydrocarbons, carcinogenic (cPAHs)	X ⁷	Х	X ⁷		X ₆	
Organochlorine pesticides					Χę	
Dioxin					X ⁶	
pH				Х		
Parameters suspected or known to be present in the soil based on due diligence	х	х	х	х	х	Х
Parameters suspected or known to be in materials/products added to soil based on due diligence	х	х	х	х	х	Х

Draft rule has another exemption for other uses approved at Ecology's discretion, conditions match most of above, cannot be more onerous

"Residential, agricultural, high frequency contact properties" means lands used for farming, residential housing, recreation, parks, schools, or lands where human contact can be reasonably expected.

"Limited access property" includes land that has limited human and animal access due to activities that take place on the property or physical barriers. Examples of such properties may include, but are not limited to, lands along highways and freeways. Limited access properties do not include land used for farming, residential housing, recreation, parks, or lands where human and animal access can be reasonably expected.

- Highway/freeway shoulders, rights of way
- Paving base
- Reclamation pits
- Industrial zoned properties





"Ecologically-sensitive properties" are lands in which the primary function is or will be to support natural habitat for native terrestrial organisms (wildlife, plants, soil biota). Such lands include, but are not limited to, critical areas or habitat identified under the Endangered Species Act, local growth management plans, habitat conservation plans, conservation reserve program, or local shoreline master programs.

"Groundwater-sensitive properties" are lands where 2,000 cubic yards or more of impacted soil/sediment will be used as fill over groundwater sources currently used or reasonably anticipated to be used as a potable source of drinking water for on-site or down-gradient receptors.





- To justify permit exemptions that come with minimal to no oversight, a
 variety of standards were considered to provide confidence that uses
 are protective without the need for a site-specific evaluation
- Though heavily influenced by state cleanup levels (MTCA* levels), they
 were not the only standards considered as they are based on cleaning
 up a dirty site, not preventing degradation of a clean site
- Acceptance of SSLs above those proposed in rule as conditionally exempt uses are still allowed under other sections of the rule, such as standards for a limited purpose landfill



Residential, agricultural, high frequency contact –



Contaminant limits account for highest level of human health protection, no ecological considerations, some groundwater protections

SSL based primarily on lowest of the following standards: (Exceptions for pH, asbestos)

- MTCA* Method A (unrestricted)
- MTCA* Method B
- EPA SSL
- Raise to background when background exceeds above standards



Limited access properties –



Contaminant limits account for lower level of human health protection than residential, no ecological considerations, some groundwater protections

SSL based primarily on lowest of the following standards:

(Exceptions for pH, asbestos, PCB, vinyl chloride)

- MTCA* Method A (industrial)
- MTCA* Method B only used when no Method A level exists
- Raise to background when background exceeds above standards



Ecologically-sensitive properties –



Taking ecological receptors into account, no human health or leaching to groundwater

SSL based on lowest of the following standards:

(Exceptions for pH, asbestos)

- MTCA* Site-Specific Terrestrial Ecological Evaluation
- EPA Eco-SSL
- Raise to background when background exceeds above standards



Groundwater-sensitive properties –



Accounts for leaching from soil to groundwater

SSL based primarily on lowest of the following standards:

(Exceptions for pH, asbestos)

- Protection of Groundwater using MTCA* 747-1
 - 1. EPA chemical specific parameters and groundwater quality standards
 - 2. Ecology Toxic Cleanup Program chemical specific parameters and potable groundwater cleanup levels
- Raise to background when background exceeds above standards





Most protective contaminant limits taking into account human, ecological, and leaching to groundwater

Rule will not apply to soil/sediment meeting clean SSLs

SSL based on lowest of the following standards:

- MTCA* Method A (unrestricted)
- MTCA* Method B
- MTCA* Site-Specific Terrestrial Ecological Evaluation
- EPA Eco-SSL
- EPA SSL
- Protection of Groundwater using MTCA* 747-1
 - EPA chemical specific parameters and groundwater quality standards
 - Ecology Toxic Cleanup Program chemical specific parameters and potable groundwater cleanup levels
- Raise to background when background exceeds above standards



Background Concentrations

- Where there is background data, most based on US Geological Survey sampling of WA soils from 2007-2010
 - Used 90th percentile as statewide level
 - Tried to address regional differences 95th percentile in certain counties
- Dioxin based on 2010 memo from Ecology cleanup program establishing background
 - Considered urban, open space, and forest samples
- cPAH newly established for this rule and based on Ecology sampling of urban Seattle soils
 - Exceeds unrestricted cleanup level

Concerns on background (remember that background is only used to raise SSLs):

- Some feel limits are too low and not realistic (e.g. Cd, Pb, Se)
- Differ from MTCA* cleanup levels that are set at background
 - MTCA* background based on early 1990's soil testing, not 2010 USGS sampling
- cPAH, arsenic exceed some cleanup levels



APPENDIX I Soil and Sediment Screening Levels (SSL) abc

Empty cells mean a value has not been determined.

Parameter CAS Numb	CAS Number	Clean Soil and Clea Sediment d		Residential/ Agricultural/High Frequency Contact Properties ^d		Limited Access Properties d		Ecologically-Sensitive Properties ^d		Groundwater- Sensitive Properties ^d	
		mg/kg Note		mg/kg Note		mg/kg Note		mg/kg Note		mg/kg Note	
acenaphthene	83-32-9	98	F	4800	С	4800	С			98	F
acenaphthylene	208-96-8	20	E					20	E		
3. acetone	67-64-1	29	F	72000	С	72000	С			29	F
4. acrolein	107-02-8	40	С	40	С	40	С				1
5. acrylonitrile	107-13-1	1.9	D	1.9	D	1.9	D				1
6. aldrin	309-00-2	0.003	F	0.059	D	0.059	D	0.1	E	0.003	F
7. allyl alcohol	107-18-6	400	С	400	С	400	С				\top
8. allyl chloride	107-05-1	48	D	48	D	48	D				
9. aluminum	7429-90-5	92400°	- 1	92400 °	I	92400°	- 1	92400 °	1		
10. anthracene	120-12-7	24000	С	24000	С	24000	С				
11. antimony	7440-36-0	1.4 °	- 1	5	Н	32	С	1.4 °	ı		\top
12. aroclor 1016	12674-11-2	5.6	С	5.6	С	5.6	С				
13. aroclor 1254	11097-69-1	0.5	D	0.5	D	0.5	D				
14. aroclor 1260	11096-82-5	0.5	D	0.5	D	0.5	D				\top
15. arsenic, inorganic	7440-38-2	13 °	- 1	13 °	I	20	В	13 °	ı	13 °	1
16. asbestos	NA	1%	К	1%	К	1%	K				
17. atrazine	1912-24-9	4.3	D	4.3	D	4.3	D				
18. barium and compounds	7440-39-3	975 °	- 1	1600	Н	16000	С	975 °	ı	975°	1
19. benzene	71-43-2	0.007	F	0.03	А	0.03	Α			0.007	F
20. benzidine	92-87-5	0.0043	D	0.0043	D	0.0043	D				\top
21. benzo[a]anthracene	56-55-3	1.4	D	1.4	D	1.4	D				
22. benzo[a]pyrene (cPAH) ^f	50-32-8	0.4	- 1	0.4	ı	2	В	1.1	G	0.4	1
23. benzo[b]fluoranthene	205-99-2	1.4	D	1.4	D	1.4	D			3	F
24. benzo[k]fluoranthene	207-08-9	14	D	14	D	14	D				
25. benzoic acid	65-85-0	320000	С	320000	С	320000	С				T
26. benzyl alcohol	100-51-6	8000	С	8000	С	8000	С				\top
27. benzyl chloride	100-44-7	6	D	6	D	6	D				
28. beryllium	7440-41-7	2.7 °	1	2.7 °	I	160	С	10	E	63	F



Parameter	CAS Number	Clean Soil and Clean Sediment ^d		Residential/ Agricultural/High Frequency Contact Properties ^d		Limited Access Properties ^d		Ecologically-Sensitive Properties ^d		Groundwater- Sensitive Properties ^d	
		mg/kg	Note	mg/kg	Note	mg/kg	Note	mg/kg	Note	mg/kg	Note
209. trichlorophenol;2,4,6-	88-06-2	10	Е	80	С	80	С	10	E		
210. trichloropropane;1,2,3-	96-18-4	0.03	D	0.03	D	0.03	D				
211. trimethylbenzene;1,3,5-	108-67-8	800	С	800	С	800	С				
212. uranium, soluble salts	7440-61-1	5	Е	240	С	240	С	5	E		
213. vanadium	7440-62-2	221 "	- 1	400	С	400	С	221 *	ı	1600	F
214. vinyl acetate	108-05-4	33	F	80000	С	80000	С			33	F
215. vinyl chloride	75-01-4	0.0001	F	0.01	Н	88	М			0.0001	F
216. warfarin	81-81-2	24	Ü	24	С	24	С				
217. xylenes ^j	1330-20-7	9	A,B	9	А	9	В			120	F
218. zinc	7440-66-6	132 °	- 1	12000	Н	24000	С	132 *	ı	6000	F

|Notes:

- A. SSZ based on chapter 173-340 WAC, Method A Unrestricted Land Use cleanup levels.
- B SSL based on chapter 173-340 WAC, Method A Industrial Properties cleanup levels.
- C. SSL based on chapter 173-340 WAC, Method B Non-Cancer cleanup levels.
- D. SSL based on chapter 173-340 WAC, Method B Cancer cleanup levels.
- E. SSL based on chapter 173-340 WAC, Table 749-3 Site-Specific Terrestrial Ecological Evaluation cleanup levels.
- F. SSL based on chapter 173-340 WAC, Equation 747-1 for deriving soil concentrations for protection of groundwater.
- G. SSL based on U.S. EPA Ecological Soil Screening Levels.
- H. SSL based on U.S. EPA Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.
- SSL based on Washington soil background levels.
- J. pH SSL based on background pH of Washington soils, and risks to humans, plants, and microorganisms.
- Asbestos SSL of 1% based on Chapter 296-62 WAC, General Occupational Health Standards.
- L SSL based on Chapter 173-303 WAC, Dangerous Waste Regulations, which requires materials with over 2 mg/kg PCB from transformers, capacitors, or bushings to be managed as special waste.
- M. SSL based to Chapter 173-340 WAC, Method C Industrial Properties cleanup levels.



- is abe based on washington son background revers.
- J. pH SSL based on background pH of Washington soils, and risks to humans, plants, and microorganisms.
- K. Asbestos SSL of 1% based on Chapter 296-62 WAC. General Occupational Health Standards.
- L. SSL based on Chapter 173-303 WAC, Dangerous Waste Regulations, which requires materials with over 2 mg/kg PCB from transformers, capacitors, or bushings to be managed as special waste.
- M. SSL based on Chapter 173-340 WAC. Method C Industrial Properties cleanup levels.
- a. Test methods used for comparison to SSL must be capable of detecting down to the SSL in order to have meaning. Instruction may need to be relayed to the laboratory to ensure the detection limit is as low as the SSL, particularly for cadmium, mercury, and selenium.
- b. Protection of surface water was not been factored into SSLs because standards vary between surface waters. Persons may need to adjust SSLs in consideration of surface water quality depending on site-specific circumstances.
- c. For parameters and SSL not listed or calculated here, SSLs must be determined following the same methodology as described below.
- d. SSLs are based primarily on the lowest levels of the following standards, adjusted up to background limits when applicable:
 - Chapts 173-340 WAC, Equation 747-1 for protection of groundwater. Calculated using two sets of inputs:
 - One set of inputs based on Ecology publication #96-02, Implementation Guidance for the Groundwater Quality Standards, Revised October 2005, and EPA Regional Screening Level Chemical-Specific Parameters Supporting Table June 2015.
 - One set of inputs based on chapter 173-340 WAC for protection of potable drinking water and in the vadose zone at 13 degrees Celsius.

Groundwater-sensitive SSLs set at the lowest of the two results above. SSLs in this chapter not calculated for all parameters. Where no SSL has been provided, SSLs need to be calculated using Equation 747-1 and applicable SSL may need to be lowered based on the resulting concentration.

- U.S. EPA Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, December 2002, OSWER 9355-4-24, December 2002, Appendix A Generic SSLs.
 Based on residential scenario and human ingestion, inhalation, and protection of groundwater assuming some separation from groundwater. Not available for all parameters.
- · Washington background limits based on:
 - Geochemical and Mineralogical Maps for Soils of the Counterminous United States, 2014, U.S. Geological Survey Open-File Report 2014-1082 for aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, phosphorous, selenium, silver, thallium, tin, uranium, vanadium, and zinc. Used Washington-specific test results for C soil horizon at 90th percentile value, with exceptions noted in footnote (f).
- Dioxin: Natural Background for Dioxins/Furans in WA Soils Technical Memorandum #8, August 2010, WA Dept. of Ecology Publication No. 10-09-053.
- cPAH: Urban Seattle Area Soil Dioxin and PAH Concentrations Initial Summary Report, September 2011, Dept. of Ecology Publication No. 11-09-049, using 90th percentile concentration.
- pH: Washington Soil Atlas, United States Department of Agriculture Natural Resource Conservation Service, http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wa/soils/?cid=nrcs144p2_036334.
- e. The following counties had one or more background soil test results showing concentrations above the 90th percentile values used in Appendix I and may adjust the SSL up to these limits, in mg/kg:

Aluminum - 189,000:	Cowlitz, Ferry, Grays Harbor, King, Lewis, Skamania, Stevens, Yakima.
Antimony - 4.9:	Chelan, Cowlitz, Ferry, King, Okanogan, Skagit, Snohomish, Whatcom.
Arsenic - 20:	Asotin, King, Lewis, Lincoln, Okanogan, Skagit, Snohomish, Spokane.
Barium – 1,520:	Asobic, Ferry, King, Okanogan, Pend Oreille, Snohomish.



Footnotes

are

important

What the draft rule section does not get at



- No notification of permit exemption or annual reporting
 - -Street waste would track under pile permit
- Surface water standards not considered in SSLs, though have at least a 50' setback
- Limited access properties not tied to industrial/commercial zoning
- Few setbacks none to buildings, wells, property boundaries, etc.
- For fill sites, no well notification to property owners within 1,000'



For your consideration during draft rule review

- SSLs –
- Look closely at the SSLs and provide justification to change them if they are off
- SSLs in rule vs. guidance to rule
 - Regulators want SSLs in rule to make enforceable, ensure consistency
 - Industry wants in rule to ensure SSLs do not get changed without a public process
 - Updating SSLs will require rule revision difficult, likely to become outdated
 - Instead of SSLs in rule, could have methodology in rule, actual numbers in separate document
- "Solid waste" label -
 - Impacted soil/sediment is solid waste by definition
 - Particularly for fill sites, concern over ramifications locally for land use approvals, zoning, landfill siting restrictions
 - UTC allows only certain haulers to transport solid waste
 - Well installation limitations within 1,000' of solid waste landfills
 - Operator certification required for solid waste landfills
 - Could remedy by defining soil/sediment used in accordance with rule as "clean," which is not solid waste and would eliminate concerns

Want more information?

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WAC 173-350-110 Draft Rule Determination of Solid Waste

Allison Kingfisher and Dawn Marie Maurer Waste 2 Resources Program





Background

Workgroup members

- Waste Management
- Washington Utilities and Transportation Commission
- Washington Refuse and Recycling Association
- Washington Aggregates & Concrete Association
- Waste Connections
- Local Governments Zero Waste Washington
- Jurisdictional Health Authorities
- Washington State Department of Transportation
- Washington State Recycling Association
- ISRI
- Cedar Grove



Definitions Workgroup

Original focus on definitions of:

- -Recycling,
- Recyclable Materials,
- -Solid Waste

But limited to the definitions in statute



Goals

- Create a framework for more consistent decision-making
- Clarify when a material qualifies as solid waste
- Decrease sham recycling



Develop a tool that creates a decision making framework to determine whether or not a material is considered a solid waste.



Rule overview

- A material is a solid waste if it meets any of these criteria:
 - The material has been discarded, abandoned or disposed of;
 - The material has been permanently placed in or on land for the purpose of disposal;
 - The material is a byproduct generated from the manufacturing or processing of a product, and is placed on the land for beneficial use;



- The material has been collected through residential or commercial solid waste or recyclable material collection;
- The material has been received at a solid waste material recovery, recycling, storage, disposal, or incineration facility;
- The generator has paid for or will need to pay for removal or processing of the material for recycling, disposal, or incineration.
- The material has been stockpiled in substantial quantities, on the ground, for eventual recycling or for use after recycling, but the market for the material is unavailable or insufficient.



- A material is no longer a solid waste if it meets all of the criteria:
 - The material is no longer discarded or abandoned;
 - The material is separated from solid wastes;
 - The material has been recycled, or is ready for reuse, as defined in WAC 173-350-100;
 - The material has positive market value, as indicated by available or sufficient markets for the material;



- -The material is stored and managed to preserve its value and in a manner that presents little or no risk to human health or the environment.
- The material does not contain harmful chemical, physical, biological, or radiological substances that will pose a threat to human health or the environment for its intended or likely manner of use.



If a material does not meet all of the [above] criteria, the person in possession of the material is considered to be handling solid waste and is required to obtain a permit from the jurisdictional health department, or meet the requirements of a conditional permit exemption under the applicable section(s) of this chapter. In an action to enforce the requirements of this chapter, the generator or person in possession of the material must demonstrate that the material is no longer a solid waste.



Definitions in section 100

• "Byproduct" means a material that is not one of the primary products of a production process, such as a process residue. A byproduct is not produced for the general public's use.



Definitions in section 100

 "Commodity" means a material that meets widely recognized standards and specifications, such as those from ASTM International or the Institute of Scrap Recycling Industries, Inc., (for example, commodity-grade scrap metal) that is mutually interchangeable with other materials meeting the same specifications, and that has well-established markets.



Definitions in section 100

 "Recycling" means transforming or remanufacturing waste materials into usable or marketable materials for use other than disposal or incineration. Recycling includes processing waste materials to produce tangible commodities. Recycling does not include crushing, shredding, compacting, sorting, baling, or repackaging when those activities are part of collection, intermediate processing, or preparation for the purpose of transport.



 "Reuse" means using an object or material again, either for its original purpose or for a similar purpose, without significantly altering the physical form of the object or material. Reuse is not a solid waste handling activity, but separating materials from other solid wastes for reuse is a solid waste handling activity. Use of solid waste as fill is not reuse.





Desired Outcomes

Benefits of this new section

- This section creates a clear framework for better consistency of decision making across all jurisdictions in the state.
- It helps clarify when a material must legally be managed as solid waste, and
- It tries to differentiate wastes from commodities and recycled products to allow legitimate products to move freely without regulation under the solid waste rules.



Benefits of this new section

- The determination of solid waste will make it easier to crack down on sham recycling.
- It will discourage speculative accumulation.
- It clarifies owner responsibility for the material.





Questions and Discussion



Thank You!

Revising the Solid Waste Rule

LUNCH BREAK 12 P.M. – 1 P.M.

WAC 173-350-210 and -310 draft rule

Allison Kingfisher and Dawn Marie Maurer Waste 2 Resources Program





Background

Sections 210 and 310 cover the standards for: Recycling, Material Recovery Facilities, Transfer Stations, and **Drop Boxes**

Basis for changes

- While section 310 worked well when it came to regulating transfer stations and drop boxes, the standards for material recovery facilities (MRFs) in 310 and recycling facilities in 210 were often confused.
- It is also possible to have both material recovery and recycling occurring at the same facility, and while both activities are part of the recycling system, the operating requirements were different.



Basis for changes

- The standards for permitted MRFs were clear under 310. 210, stated that facilities that could not meet the terms and conditions for exemption needed to obtain a permit, but remained silent on what those permitting requirements were.
- Sometimes facility owners submitted notifications of exemption when their operations required permits, putting them out of compliance, causing significant delays to receiving their operating permit.



Basis for changes

- Ecology sought to reduce this confusion and make the standards for those two facility types consistent in the requirements for exemption
- We therefore moved the standards for MRFs from section 310 to section 210





Rule Overview

Primary changes

- The material recovery facilities standards were moved from WAC 173-350-310 to section 210, which is now called "Recycling and material recovery facilities".
- The title for WAC 173-350-310 was changed to "Transfer stations and drop box facilities", and it now only covers those standards.



Primary changes

- Both the definitions of MRFs and Recycling were updated in part to help clarify that recycling and material recovery, while different activities, can both occur at the same location.
- Handling requirements for both permitted and permit exempt MRFs and recyclers were standardized.



 "Material recovery facility" means any facility that receives, compacts, repackages, or sorts source separated solid waste for the purpose of recycling."



 "Recycling" means transforming or remanufacturing waste materials into usable or marketable materials for use other than disposal or incineration. Recycling includes processing waste materials to produce tangible commodities. Recycling does not include crushing, shredding, compacting, sorting, baling, or repackaging when those activities are part of collection, intermediate processing, or preparation for the purpose of transport.



 "Commingled recyclable materials" means a mixture of several types of recyclable materials in one load or container including, but not limited to, aluminum cans, paper, plastic, and cardboard in one container, or wood, concrete, and metal in one load



Draft 210 standards

- To operate under exemption, both facility types must accept only source separated materials that are segregated into individual streams – no comingled recyclable materials.
- Facilities may accept as may material streams as they wish as long as EACH stream has less than 5% contamination.
- Both facility types are subject to the same permitting standards if they can't meet the conditions for exemption.
- The permitting standards are essentially what all permitted MRFs have been required to meet under the current rule.



Draft 310 standards

- The language in 310 was revised for clarity, but without major changes to the substantive requirements.
- The standards for plans of operation were spelled out in greater detail to help operators understand what to include in that document.
- As we did for all waste handling actives in section 020, an exemption for drop box facilities accepting only recyclable materials was moved from section 020 to 310 be with the other drop box requirements.



Section 320 — Piles used for storage or treatment

- The piles section provides applicability and requirements associated with the storage, treatment, or recycling of solid wastes in piles.
- This may be relevant to your MRF or recycling facility!





Desired Outcomes

Benefits of Changes

- Adding MRFs to the Recycling section improves the likelihood that owners/operators will identify the appropriate standards to follow, whether for a permit or a permit exemption.
- Aligning the requirements of the two types of handing levels the playing field for design and operations.



Benefits of Changes

- Decoupling MRF permitting standards from those of transfer stations helps clarify to other regulatory agencies that permitted MRFs are not disposal facilities. This can help with zoning issues.
- Clarifying requirements for the plan of operations increases the likelihood that operators can turn in a complete application the first time and reduce the delays in getting a permit issued.





Questions and Discussion



Thank You!

WAC 173-350-360 Moderate Risk Waste Handling

Al Salvi

Regional Solid Waste Specialist Waste 2 Resources Program





Moderate Risk Waste (MRW) Handling Highlights of Proposed Changes

Applicability

Modified to clarify where and when MRW regulations will apply.



Exemptions

Reorganized exemption section

 Added new exemption for law enforcement

 Expanded requirements for product take back centers



Design Section Clarifications

- MRW segregated for incompatible wastes
- Floor or other structure serving as secondary containment
- Facility/Site Signage
- Protection of MRW from wind, rain and snow



Operating Section Clarifications

- Operating Standards Section has been restructured
- Annual Reporting
- Shipping MRW to out-of-state locations



Operating Section Clarifications, continued

 Spills, discharges, or any failure to comply with requirements

 Clarified what records need to be retained in the operating record



Operating Section Clarifications, continued

Training Requirements

 Employees trained to handle MRW must be present when MRW is accepted



MRW Handling

QUESTIONS?



WAC 173-350-320 Piles Used for Storage, Treatment, or Recycling

Al Salvi

Regional Solid Waste Specialist Waste 2 Resources Program





Piles Used for Storage, Treatment, or Recycling

Highlights of Proposed Changes

Applicability

This section was completely rewritten to require permits for facilities that continually have piles on-site.



Applicability, continued

The part of the applicability section that speaks to what the piles section is **not** applicable to, has been expanded.



Exemptions

This section was completely re-written. The rewrite:

- Expanded the amount and type of exemptions available
- Makes clear exemptions are generally only available for temporary piles of limited amounts of waste



Exemptions, continued

- In general, the standards for an exempt pile have been expanded to require notification and reporting.
- The inert waste exemption volume was expanded from 250 cubic yards to 2,000 cubic yards.



Operating Section Clarifications

- Operating Standards Section has been restructured.
- Language changed and added for impacted soils and sediments to better interact with the new section in the 350 rule on impacted soils and sediments.



Piles Used for Storage, Treatment, or Recycling

QUESTIONS?



WAC 173-350

Solid Waste Handling Standards Update Sections 330, 400, 410 – and 405

Bill Harris and Wayne Krafft Waste 2 Resources Program





Section 330: Surface Impoundments and Tanks

Section 330: Clarifying Applicability

- Principal application is to systems for handling leachate at landfills, but...
 - Other sections of Solid Waste Handling Standards, as well as WAC 173-308 - Biosolids Management, also rely on Section 330 for design, construction, and operating criteria.
 - Clarify that some or all of Section 330 requirements are relevant in those cases.
- Expand scope to include piping systems which connect to surface impoundments or tanks.



Section 330: Updated Criteria

- Periodic leak testing.
- Periodic maintenance and cleaning.
- Leakage criterion to trigger repairs and assessments.
- Controls on public access.
- Document how facilities are designed and constructed.

- Plans of operations.
- Location in relation to existing water wells.
- Notification to nearby property owners.
- Permits for solid waste activities which include surface impoundment and tanks must address requirements.





Section 400: Limited Purpose Landfills

Section 400: Highlight Flexibility

- Reorganize design standards.
 - Demonstrate that a proposed design meets the relevant performance standards.
 - Several options available to limited purpose landfill operators for liner and final cover designs.



Section 400: Improve Access to Information

- Expand description of what data needs to be collected at limited purpose landfills, and how it should be reported.
- Proposed language largely reflects current practices by most limited purpose landfill operators.
- Establish a consistent basis for producing data to guide the management of facilities throughout the state.



Section 400: Consistency and Clarity

- Mirror approaches adopted in 2012 for the Criteria for Municipal Solid Waste Landfills, WAC 173-351.
 - Redefine endpoints for post-closure to focus on functional stability of the landfill.
 - Eliminate use of subjective stability criteria.
 - Eliminate arbitrary timeframe for financial assurance planning.
 - Use environmental covenants to provide continued protection for human health and the environment after post-closure.



Section 400: Updated Criteria

- Document how facilities are designed and constructed.
- Plans of operations.
- Location in relation to existing water wells.
- Notification to nearby property owners.





Section 410: Inert Waste Landfills

Section 410:

Expanding Conditional Exemptions

- Adjust limit on volume of inert waste which can be disposed without a permit under a conditional exemption.
 - Raise to 2000 cubic yards from current 250 cubic yards.
 - Operator must provide notification of intent to its local jurisdictional health department and to Ecology.
- Disposal of less than 250 cubic yards of inert waste doesn't require notification.



Section 410: Updated Criteria

- Controls on public access.
- Document how facilities are designed and constructed.
- Plans of operations.
- Location in relation to existing water wells.
- Notification to nearby property owners.





Section 405: Hybrid Waste Landfills

Section 405: Aligning requirements for landfills

 Sections 235 and 995 establish criteria for impacted soils



Section 405: Aligning requirements for landfills

Section 410 establishes criteria for inert waste landfills



Section 405: Aligning requirements for landfills

 Section 405 combines these to create guidelines for landfills receiving both inert waste and impacted soils.



Section 405: Aligning requirements

- Materials included (or excluded) under 235 will be treated the same in hybrid waste landfills
- Contaminant limits from 235 and 995 are included for hybrid waste landfills



Section 405: Exemptions

 Landfills disposing of less than 2,000 cubic yards would be not be required to obtain a solid waste permit (aligns with 410).





Questions and Discussion

Waste tires: Proposed modifications to WAC 173-350-350 and the addition of WAC 173-350-355

Isaac Standen

Facilities Specialist
Waste 2 Resources Program



Units of weight made consistent

- All weight units will be in tons instead of pounds.
 - For example, The regulatory threshold for waste tire storage found in WAC 173-350-350(1)(a), sixteen thousand pounds of tires will be converted to eight tons of tires.
 - This keeps units consistent provides clarity to the language.
 - This is a language change, but not a substantive change.



Inclusion of indoor waste tire storage under regulation

 Indoor storage of more than 8 tons of waste tires would be regulated as waste tire storage facilities under WAC 173-350-350. Indoor storage applies to enclosed buildings and structures, but not in mobile containers used for transport.



Inclusion of indoor waste tire storage under regulation (continued)

- This proposed modification includes language for design standards of indoor storage based on fire code.
 - (reference: International Fire Code 2012 section 903.2.9.2, section 3206.1, and section 3409.1)
- This is a substantive change. The current rule only regulates outdoor storage of tires.
 The proposed modification incorporates the regulation of indoor storage under this rule as well.



Inclusion of indoor waste tire storage under regulation (continued)

- Rational for this proposed modification includes:
 - Waste tires can present a environmental, public health and safety liability even when stored inside.
 - The need for proper financial assurance.
 - Waste tires typically have a low to negative market value and thus present a financial liability wherever they are stored.
 - Financial liability brings the need for financial assurance.



Inclusion of indoor waste tire storage under regulation (continued)

- -Rational continued:
 - Level playing field
 - -The regulatory inclusion of indoor waste tire storage could mean more of a level playing field among all waste tire storage facilities (indoor and outdoor).
 - A level playing field is important since the waste tire industry runs on a very narrow profit margin.



Design standards if outdoor storage modified to accommodate current fire code

- Outdoor waste tire storage design standards will be updated to reflect an update in fire code.
 - (reference: International Fire Code 2012 Section 3405.1 to 3405.7)



Design standards if outdoor storage modified to accommodate current fire code (continued)

- -This is a substantive change. Since the updated fire code is more stringent for waste tire storage than previously, the design standards are also more stringent.
 - However, since design standards are based on fire code, the local fire marshal should enforce these same standards independent of this rule.



Changes in language to reflect transfer authority of licensing

- The Department of Revenue Business Licensing Services has taken over the role of issuing licenses to waste tire carriers and storage facilities from the Department of Licensing.
 - The pertinent portions of the waste tire storage and transportation sections will be updated to reflect this change.



Changes in language to reflect transfer authority of licensing (continued)

- The fees for waste tire storage licenses, waste tire carrier licenses, waste tire carrier cab cards, and the refundable amounts thereof will be referenced generically instead of actual dollar amounts as written in the current rule.
 - Rational: The Department of Revenue revises their own fee schedule periodically.
- These are primarily logistical changes as opposed to significant substantive changes.



General cleanup of language to ease interpretation/implementation.

- Various parts of this section will be cleaned up to provide more clarity for ease of reading and interpretation.
 - Waste tire storage has remained in section 350, while waste tire transportation has been moved into an entirely new section 355.
 - Operating standards have been revised to fit a new standardized language format that will be consistent with several other sections throughout the rule.
- These are primarily language changes rather than substantive changes.



Contact info/Discussion and Questions

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WAC 173-350-700,710,715 Solid Waste Permitting

Chuck Matthews

Regional Solid Waste Specialist Waste 2 Resources





Solid Waste Permitting Highlights of Proposed Changes

Solid Waste Permitting Highlights of Proposed Changes

- Solid waste permitting is largely prescribed in statute.
- Proposed language focuses on clarifying and updating language.



Solid Waste Permitting Highlights of Proposed Changes

Draft language

- Clarifies which cleanup activities are not subject to solid waste permitting.
- Incorporates permit review requirements by WSDA for certain solid waste handling activities as prescribed by ESSB 6605.
- Establishes language for permit transfers.
- Updates permit modification language.
- Updates permit variance language.



Solid Waste Permitting

QUESTIONS?



WAC 173-350-200 Beneficial Use Permit Exemptions

Chuck Matthews

Regional Solid Waste Specialist Waste 2 Resources Program





Beneficial Use Permit Exemptions Highlights of Proposed Changes

Beneficial Use Permit Exemptions Highlights of Proposed Changes

Process and administration remains largely unchanged except that draft language:

- Incorporates requirements of ESSB 6605, requiring WSDA review of all applications to help prevent spread of agricultural pests and disease.
- Proposes that alternative methods of intermediate storage may be considered during the BUD application process.
- Updates public notice procedures to reflect efficiencies of current technology.



Beneficial Use Permit Exemptions

QUESTIONS?



Sections with minor changes

Kyle Dorsey

Rules and Policy Coordinator Waste 2 Resources Program





Read the Rule!



Things we really haven't changed

Things we really haven't changed

- 010- Purpose
- 025 Owner responsibilities for solid waste
- 300 On-site storage, collection, and transportation standards
- 490 Other methods of solid waste handling





Things we have changed, but didn't talk about today

040 - Performance Standards

- Changed "conform with" to "must not be in conflict with" the approved local comprehensive solid waste management plan
- Comply with all other applicable . . .
 regulations including, but not limited
 to, local zoning, Washington State
 Department of Labor & Industries,
 and fire code requirements.



Things we have changed, but didn't talk about today

100 - DEFINITIONS

Definitions Deleted

- Contaminated dredged material
- Contaminated soils
- Intermediate solid waste handling facility
- Pyrolysis



Definitions Revised

- Crop residues
- Drop box facility
- Existing facility
- Inert waste
- Land application site
- New solid waste handling unit
- Pile
- Point of compliance
- Post-closure care
- Public facility
- Recycling
- Solid waste
- Transfer station



Definitions Added

- Asphaltic materials
- Brick and masonry
- Byproduct
- Cementitious materials
- Ceramic Materials
- Clean soil and sediment
- Comingled recyclable materials
- Commodity
- Cured concrete
- De minimis
- Due diligence
- Ecologically-sensitive prop's
- Engineered soil
- Glass
- Groundwater-sensitive prop's

- Hybrid waste
- Impacted soil and impacted sediment
- Law enforcement agency
- Limited access properties
- Manufactured topsoil
- On-farm vegetative waste
- Petroleum contaminated soil
- Release
- Representative sampling
- Residential, agricultural, high frequency contact properties
- Reuse
- Sediment
- Soil
- Stainless steel and aluminum



230 – Land Application

Added a conditional exemption for "on-farm vegetative waste."

- New term that describes plant-based wastes produced on-farm from the raising, growing, or processing of plants and animals.
- Allows agronomic land application of any vegetative waste produced on a farm to be applied on that farm without a permit.
- Examples may include mint slugs when the processing of mint to extract oil occurs at the farm growing mint, and grape pomace when the processing of grapes into wine occurs at the vineyard growing grapes.



240 –Energy Recovery and Incineration Facilities

- Changed the standard of applicability from facilities "designed to burn" to all facilities "capable of burning" more than 12 tons of solid waste or refusederived fuel per day.
- Added requirement to notify the local health department prior to any significant deviation from the approved plan of operation.



500 - Groundwater Monitoring

- All groundwater monitoring data must be submitted in an electronic format by April 1 of each year.
 - Guidance will be provided
- Since groundwater standards refer to "total metals," but ion analyses require "dissolved metals," both types of analyses will be required for some constituents.



600 – Financial Assurance Requirements

- Added requirement to use state prevailing wages in closure and post-closure cost estimates.
 - –A local health authority needing to perform closure or post-closure would be required to ensure the work is done by individuals who are paid state prevailing wages.



900 - Remedial Action

- Establishes that the section applies only to remedial actions at permitted solid waste facilities.
 - Solid waste permitting agency would continue to oversee solid waste handling activities under the solid waste permit.
 - Solid waste permitting agency must coordinate with Ecology to incorporate permit modifications necessary to address impacts on solid waste handling activities due to remedial actions.



Next Steps



Next Steps

Sept. 6 – Informal comments due Late 2016 – Formal rule proposal Early 2017 – Public hearings Mid 2017 – Rule adopted

For more, visit: www.ecy.wa.gov/programs/swfa/rules/ wac173350/1308ov.html



Revising the solid waste rule

THANK YOU!